

EXHIBIT B

SCOPE OF WORK

This project is focused on a state-of-the-art sampling and analysis process at the Colorado River Municipal Water District's (CRMWD's) Raw Water Purification Facility (RWPF) at Big Spring. The proposed sampling plan includes laboratory analyses for pharmaceuticals, hormones, and other compounds of interest as well as a full suite of pathogens (virus, protozoa, and bacteria). In addition, we plan to monitor for surrogates and develop correlations between them and the primary constituents, which will increase the confidence in safe water production and reduce future monitoring costs at Big Spring and for indirect potable reuse (IPR) and direct potable reuse (DPR) facilities throughout Texas. The main goal of this project is to demonstrate to Texans that both IPR and DPR are a safe and viable alternative for producing potable water. The initial proposed scope of the project has been described in the proposal (Attachment A). This scope has been modified from the original proposal at the request of the Texas Water Development Board (TWDB) as described below.

Our final scope includes the following tasks:

TASK 1. PREPARE FOR SAMPLING

1. Perform an initial screening evaluation of the current RWPF water quality and operational data. This comprises comparing water quality data collected at RWPF to date with data obtained from other advanced treatment systems nationally (examples: West Basin Municipal Water District and/or Orange County Water District) making potable water and evaluating operational data from each of the advanced treatment processes to ensure that the processes are operating as designed.
2. Develop a testing protocol that includes measurement of chemicals of emerging concern (CECs) and pathogens at several locations in the treatment process at the RWPF. The testing protocol will include a field evaluation of and sampling for surrogate measurements to supplement CECs and pathogen testing. The testing protocol will cover testing at quarterly intervals for up to one year. Test parameters are anticipated to include the following pathogen / surrogate pairs: adenovirus / MS-2 bacteriophage, Cryptosporidium / particle counts, and E *Coli* and total coliform as surrogates for enteric bacteria. Note that analyses for bacteroidales, which were to be used to determine the "microbial fingerprint" associated with wastewater, are currently not included in the scope. These samples were intended to support the public communications effort (formerly Task 3) that has been eliminated from the scope. Test parameters are also anticipated to include the constituents of emerging concern (CECs) as listed in Table B-1 and the following surrogate measurements: chloramines testing for UV/AOP effectiveness, Trasar testing for RO integrity, and EEM characterization as a bulk measure of organic content.

Our scope for this task includes development of a Texas-specific version of the *Integrated Treatment Train Toolbox for Potable Reuse (IT³PR)* being developed under WaterReuse Research Foundation Project No. 11-02. The existing IT³PR will be modified to include Texas-specific treatment goals and treatment credits awarded. These treatment goals and treatment credits will be coordinated with TCEQ.

Deliverables for this task:

The Monitoring Guidance for DPR will be submitted in draft form for TWDB review, then revised and finalized based on the comments received. The Texas-specific IT³PR toolbox will be submitted in Microsoft Excel format with an associated User's Manual.

TASK 4. SUPPORT CRMWD WITH THE COLLECTION OF ADDITIONAL SAMPLES

This task includes the following items:

- Train CRWMD staff in the field filtering procedure for the collection of Cryptosporidium and Giardia samples during the first quarterly sampling event conducted under Task 2.
- Pay, from the project budget, the analytical invoices and shipping costs, for two years of monthly field-filtered Cryptosporidium and Giardia samples, one each from the influent and finished water of the RWPF, for a total of 24 shipments and 48 samples, up to a maximum amount of \$30,000.
- Maintain an Excel sheet with analytical results from the sampling that will be shared with CRMWD, and
- Incorporate, by addendum, into the final report developed under Task 2, the results from the samples collected under this Task.

Our scope for this task specifically does not include:

- Collection of the Cryptosporidium and Giardia samples discussed above, or
- Reporting results from this sampling campaign to the Texas Commission on Environmental Quality or any other regulatory body.

Deliverable for this task:

The project deliverable for this task is limited to a data table that will be appended to the final sampling report provided with Task 2 at the conclusion of the project.